

CLAIMS:

1. A method of obtaining a pair of substrates spaced from each other by spacers comprising:

a) providing a first substrate overlaid with a first layer with a patterned hydrophobic second layer or a patterned hydrophilic second layer that can take on an electrostatic charge; and

b) optionally treating the parts of the first layer that are not covered with the hydrophobic or hydrophilic second layer to form a patterned hydrophilic third layer that can take on an electrostatic charge with a sign that is opposite to the sign of the electrostatic charge that can be taken on by the hydrophilic second layer, if the second layer is a hydrophilic layer;

c) providing at least one of the first, second, and third layer with an electrostatic charge;

d) contacting the electrostatically charged patterned first substrate with a dispersion of polymeric particles (spacers), which are functionalized so that the polymeric particles at their surface can take on an electrostatic charge with a sign opposite to the sign of the electrostatic charge of the at least one of the first, second, and third layer, to electrostatically bond the polymeric particles to the layer provided with an electrostatic charge having a sign that is opposite to the sign of the electrostatic charge of the polymeric particles;

e) optionally removing the functionalized polymeric particles from parts to which the functionalized polymeric particles are not electrostatically bonded, and/or the hydrophobic or hydrophilic second layer, if the polymeric particles are not electrostatically bonded thereto; and

f) thereafter connecting the first substrate to a second substrate to give the pair of substrates.

2. The method according to claim 1 wherein the first layer is a conductive or semi-conductive layer.

3. The method according to claim 1 wherein the first layer is an alignment layer.

4. The method according to claim 2 wherein the conductive or semi-conductive layer is overlaid with an alignment layer.

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5. The method according to any one of claims 1-4 wherein spherically shaped functionalized polymeric particles are used.

6. The method according to claim 5 wherein polymeric particles are used having
10 a diameter of about 1 μm to about 10 μm .

7. The method according to any one of claims 1-6 wherein the polymeric particles are functionalized with acid groups or basic groups.

15 8. The method according to any one of claims 1-6 wherein the polymeric particles are functionalized with carboxylic acid or sulfonic acid groups or with amine groups.

9. A device comprising two substrates spaced from each other by polymeric
20 particles (spacers) (1), at least the first substrate (2) being overlaid with a first layer (3) and patterned by a hydrophobic or hydrophilic second layer (4), and optionally by a hydrophilic third layer (5) that has an electrostatic charge with a sign that is opposite to the sign of the electrostatic charge of the hydrophilic second layer, if the second layer is a hydrophilic layer; and wherein at least one of the first, second, and third layer has an electrostatic charge,
25 characterized in that the polymeric particles are positioned between the pair of substrates in a pre-determined pattern and are functionalized so that the polymeric particles at their surface have an electrostatic charge with a sign that is opposite to the sign of the electrostatic charge of at least one of the first, second, or third layer to which the polymeric particles are electrostatically bonded.

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10. A pair of substrates spaced from each other by polymeric particles (spacers) wherein the polymeric particles are positioned between the pair of substrates in a pre-determined pattern and are functionalized so that the polymeric particles at their surface have groups that can take on an electrostatic charge.

11. An LCD display comprising the pair of substrates of claim 10 wherein at least one of the substrates may optionally be provided with at least one layer selected from an electrode layer and an alignment layer.